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ABSTRACT

This paper reviews the services provided by the ERIC system and suggests ways to broaden its scope through coordination with other existing education databases. The first of four major sections chronicles the evolution of ERIC and explains why it has not been able to exercise true bibliographic control over the literature of education. The second section identifies and discusses four stages at which efforts could be made to coordinate the various education information databases: (1) coverage, acquisition, and selection; (2) processing; (3) finding the right database to search; and (4) retrieval. Examples of possible applications are included. The third section introduces and discusses the concept of a "federation" of education databases which would ensure that all domestic educational resources would be available to users through clearly delineated channels. It is suggested that ERIC could serve as a focus of such an organization. The concluding statement reiterates the ERIC Facility's belief that possibilities exist at many levels for helping to coordinate the activities of the various education information databases, and suggests that they should be divided into primary education databases, where the focus of the database is education, and secondary education databases, where the focus is elsewhere, e.g., sociology, but that contain some education-related material. Four attachments to the paper provide a comprehensive list of types of printed and nonprint educational resources; an organizational chart showing ERIC as the focus of a national educational information system providing access to educational resources of all types; tables showing primary and secondary education databases, their printed form, source, coverage, online vendor, and online designation; and a summary of the paper for verbal presentation. (SD)

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WHAT ARE THE POSSIBILITIES FOR COORDINATING
EDUCATION INFORMATION DATABASES?

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- A. Educational Resources - Comprehensive List of Types of Materials
- B. ERIC as the "Monitor" of a National Educational Information System Providing Access to Educational Resources of All Types
- C. Education-Related Databases
 - 1. Primary Education Databases
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- D. Paper Summary, for Verbal Presentation (running time 12-14 minutes)

I. BACKGROUND - Why ERIC Isn't the One-Stop Shopping Center for All Educational Literature

Ever since library school I have been interested in the concept of "bibliographic control," that is, systematic and complete coverage by a library/information system of a specific segment of the literature—whether that segment be a type of literature (such as books, journal articles, documents, theses, etc.), the literature of a country or region (such as Nepal or Central America), or the literature of a subject (such as autism or aerospace).

When I went to work for the Library of Congress (LC), I found myself with an organization that was the national library in fact, if not officially, and that assumed responsibility for being so complete for at least the domestic book literature that it more than satisfied my yen for "bibliographic control."

Later I went to work at the NASA Scientific and Technical Information Facility (NASA/STIF), in the early days of the space program. We had a clear mandate to collect everything scientific related to "aerospace," wherever it might be found. It was a joy to have a nice clear goal and the resources to pursue it.

I joined ERIC in 1970, right after it had added to its stable the Current Index to Journals in Education (CIJE). ERIC clearly at that point had certain expansion aspirations, but as it later turned out, never managed to get the resources to back them up. It had originally begun in the mid-1960's as a system for controlling the contractor report literature generated by the projects of the Office of Education (Bureau of Research). It rapidly graduated to the education-related technical report or document literature wherever it found it.

This literature had traditionally become a government responsibility because, while it may have a significant information content, it was not formally published and was seen as having little commercial value. For 3-4 years the report literature remained ERIC's focus, but with the agency's contractor literature eventually under control (via the monthly abstract journal Resources in Education - RIE), ERIC branched out in 1969 to include the journal article literature. In order to encompass this larger segment of the literature within its then increasing but still modest resources, ERIC shifted from full 200-word abstracts (as done for RIE) to 50-word annotations of journal articles selectively applied. It also turned to the private sector, teaming with Macmillan Information to get the work done. The ERIC Clearinghouses provided the data. Macmillan compiled the data by computer, photocomposed, printed, and published the product, all at no cost to the Government.

The CIJE arrangement worked, but journal articles were all ERIC could manage to add on without additional resources, and even there it was straining at the seams. To this day, ERIC has never managed to satisfactorily encompass the complete journal article literature of education. It doesn't cover as many journals as it should. It doesn't cover as many journals comprehensively as it should. It doesn't

systematically review for possible inclusion all new education journals as they appear. It doesn't cover nearly as many of the major foreign English-language education journals as it probably should.

Unable to completely swallow the journal literature, there was never a serious question of ERIC's adding the book literature, the thesis literature, or audiovisual products. To be sure, the question periodically arose concerning particularly the book literature, simply because it was the most obvious missing link in ERIC's coverage. Users would frequently ask about it. The party line became that the regular library community was doing such a good job with the book literature that ERIC didn't need to duplicate their efforts. To some extent this was true, but it didn't help to make ERIC a more complete discipline-oriented database and it certainly offered little consolation to the users who then wondered where to go next, who really wanted one-stop information shopping, but who were made to feel a little mentally deficient by not knowing how to interrogate that library system successfully for what they wanted.

The truth of the matter was that ERIC would have liked to cover books, but that it didn't have the funding to do so. The truth was that there wasn't an easy way using conventional systems to subject search the book literature of education. The library community's 3x5 cards and IC subject headings simply didn't do the job in this area.

It took me a while to figure all this out. With my predilection for "bibliographic control," in my early years with ERIC the Facility first argued for books, with little success for the reasons previously noted. Then we tried to promote education-related dissertations and theses, but the ostensible reason for not moving in that direction was that University Microfilms (UMI) already covered them. Then we suggested greater coverage of the education-related English-language literature of other countries. It was hypothesized (somewhat unjustly, I'm sure) that the U.S. educational community had little interest in what went on in the field of education outside this country. When we argued unsuccessfully for more aggressive acquisition of the state and local level document literature, I finally grasped the truth. In point of fact, ERIC simply didn't have the resources to expand its coverage. It dreamed and it hoped and it floated trial balloons, but it then always had to find some reason for not realizing its dream.

In the early days, ERIC was not so open about these reasons. It somewhat embarrassedly made up excuses, such as the ones I've mentioned. It is only in recent years, when the resource pinch has gotten so severe, that ERIC has managed to bring itself to speak frankly about the reasons for its failure to exercise true bibliographic control over the literature and other resources of education—the lack of a mandate from the top (of the agency) pertaining to breadth of coverage, the lack of funding to match with such a mandate.

We still have hopes that someday ERIC will be able to expand its coverage, but I no longer hold my breath on that issue and when I speculate on practical solutions to the problem of bibliographic control over the field of education, my mind turns more toward cooperation, coordination, compatibility, and even "federation," (which I will explain later), with other existing databases that contain information relevant to education.

II. COORDINATING EDUCATION INFORMATION DATABASES— FOUR STAGES AT WHICH COORDINATING EFFORTS COULD BE MADE

All of which brings us to our topic today: "What are the Possibilities for Coordinating Education Information Databases?"

Let us start this topic by outlining four stages of the process at each of which coordinative efforts could be made:

Database	Stage I: Coverage, Acquisition, Selection (pre-processing)
Generation—	Stage II: Processing
Searching	Stage III: Finding the Right Database to Search
& Retrieval—	Stage IV: Retrieval

I will discuss each of these stages in turn and provide some examples of possible coordination at each stage.

A. STAGE I: COVERAGE, ACQUISITION, SELECTION

This stage concerns what you cover. It divides up the pie. This is the pre-processing stage and ideally involves coordination of coverage, acquisition, and selection to ensure that all is covered somewhere and that the user can tell who covers what. It may also involve agreements to transfer materials between participants, as appropriate, in accordance with the coordination protocols.

Some possible examples:

1. Audiovisual Materials

Documents entering ERIC sometimes come accompanied by tapes, slides, videocassettes, records, photographs, movies, etc. An agreement might be reached for the ERIC Clearinghouses to transfer all such audiovisual collateral material (or news about such items) to a designated "Audiovisual Database for Education," e.g., A-V Online.

2. National Coverage of Journals the Responsibility of Each Country

With each English-speaking country having more-or-less their own national equivalent of ERIC and with all of them heading toward online access, if not already there, an agreement might be reached to allocate each country's journals to each country's own system, i.e., leave coverage of British education journals to the British Education Index; leave coverage of Canadian education journals to the Canadian Education Index, etc. Free to specialize, each country might then forge a concomitant agreement to cover their respective national journals more completely than is done at present.

3. Core-Education Journal Concentration

ERIC currently covers a certain number of non-education journals, or journals peripheral to education, in which occasional education-related articles appear, e.g., Bulletin of the Atomic Scientists, Chemical and Engineering News, Psychological Review, Social Policy, etc.

If ERIC concentrated on covering the core education journals and left the peripheral journals to the services handling that particular discipline (e.g. Psychological Abstracts), then it might be able to handle the core education journals more comprehensively.

Alternatively, ERIC could cover the core education journals, but could also make arrangements with the other services to send ERIC (or inform it of) education-related articles appearing in the journals regularly covered by those services. In this way, ERIC could obtain the desired bibliographic data concerning education-related articles in non-education journals through sharing and without actually going to the expense of "covering" those journals in a conventional sense.

4. Dissertations/Theses

The number of education-related doctoral dissertations in this country each year is modest. In the interests of one-stop-shopping and a more complete domestic education database, it might well be advisable to include these items in ERIC even though they are already included in UMI's Dissertation Abstracts file. The other English-speaking countries all do this. An agreement might be reached with UMI to systematically include education-related doctoral dissertations in ERIC. This would no doubt be eminently acceptable to UMI insofar as they would remain the document delivery source for such items and announcement in ERIC would help publicize the existence of these items (and their possible sale from UMI).

5. Books

The library at OERI has aspirations to be the "National Education Library." Whether or not this happens, the library attempts to comprehensively collect education-related published books and monographs. An agreement might be reached to formalize the comprehensive education-related book/monograph acquisitions responsibility of this library and also to ensure that it would provide bibliographic data for all such material acquired to the Library of Congress National Union Catalog and to such widely-accessible national library data networks as OCLC (to the extent that the data were not already being provided by LC itself or by others). (See entry in Attachment C.1 for OCLC's "Education Materials in Libraries" (EMIL) file available on CD-ROM).

6. Systematic Review of Other Databases to Find Education-Related Materials Contained Therein

Literature dealing with education can appear anywhere, including many unexpected and out-of-the-way places, e.g., travel/recreation magazines, small audience technical journals, special interest group publications, etc. There is no practical way that ERIC can monitor all the possible publishing outlets for education-related literature. However, much of this literature is picked up by other bibliographic services having different mandates, e.g. the psychological literature, the sociological literature, the popular magazine literature, the business literature, literature for the aging/elderly, etc. ERIC could mine a lot of this literature via systematic review of other databases to find any education-related materials they may have processed.

B. Stage II: Processing

This stage concerns how you cover the material, how you process it. Every organization has its own processing rules, its own conventions, its own authority lists, its own indexing vocabulary, all intended to satisfy its own needs and the needs of its clientele. At this database-generation stage, coordination would ideally involve the achievement of some compatibility in processing techniques and conventions, authority lists, indexing vocabularies, etc. Achieving some basic similarities at this stage would be beneficial for the users who would then have less to learn and would not be faced with mind-numbing differences between sources and systems. Cross-database searches would be facilitated.

However, this is a particularly difficult area for long-established systems to make much progress in because of the heavy investment in the existing structures. Databases that have done something a certain way for many years are not easily changed without trauma to software, online vendors, users, etc.

Nevertheless, there are opportunities that might be seized if ERIC were actually seeking to operate in this area.

Some possible examples:

1. Lexicography

ERIC maintains the major thesaurus or subject indexing vocabulary in the field of education: the Thesaurus of ERIC Descriptors. Not every organization can afford to do this and ERIC has found it difficult enough, but ERIC has managed to place just enough of a priority on lexicography that its vocabulary is recognized as pre-eminent in the field. This has led other English-language systems to attempt to take advantage of the vast amount of work represented by ERIC's thesaurus. The Australian, British, and Canadian education thesauri all took ERIC as a starting platform and varied from there to fit their own needs. This has led to a significant overlap in the subject indexing vocabularies of the four countries. The continued and on-going sharing of lexicographic data between the members of this group is calculated to maintain this terminological "compatibility," such as it is.

The present arrangement is very informal. It might be made more formal and with a firmer commitment to continue it and to actually work toward indexing vocabulary compatibility. Also worth thinking about seriously is a "global" education thesaurus, incorporating the terms from all four countries in one volume and constructing cross-references between them that would help users to make equivalent searches in the databases of all four countries.

2. Data Fields

ERIC has a wide variety of fields or data elements. The theory has always been that as the database grows and increases in number of records, it is necessary to provide users/searchers with additional ways to discriminate among records and to restrict the output of searches. For this reason, ERIC has periodically added new fields to the file, e.g., Identifiers, Publication Type, Geographic Origin, Governmental Level, Target Audience, etc. Since ERIC currently has the largest number of such fields, other related databases could perhaps be persuaded to model on ERIC's methodology in each case whenever adding new fields themselves.

3. Information Standards

Information standards provide an opportunity for different organizations to drop their differences and to climb aboard the same band wagon. A standard in this country is a consensual construct designed to be acceptable to all, to be a good solution to the problem it addresses, and to obviate the need for everybody inventing their own solution (or perhaps "reinventing the wheel").

Perhaps the most obvious examples would be the International Standard Book Number (ISBN) and International Standard Serial Number (ISSN). These are unique identifying numbers assigned to published books and serials, respectively. ERIC captures ISBN's in its "Identifying Numbers" field, but it hasn't yet made use of the ISSN, partly because the ISSN, being assigned to a journal rather than an article, would be the same for every article processed from a particular journal. Nevertheless, the ISSN could be useful in searching and if captured for individual resumes, could obviate the need to do relatively clumsy proximity searching on the words in journal titles when searching by journal name.

Coordination here could mean that all parties to the agreement agree to systematically employ the ISBN and ISSN standards in their database records.

Other existing information standards could be examined for feasibility of use by the group. As new standards are issued by the National Information Standards Organization (NISO), they also could be systematically examined to determine their applicability to the education database realm.

4. Authority Lists

Authority Lists provide another significant opportunity for coordination. Lists of countries, of languages, of document types, of organization names, of Identifiers, all require a set of rules or conventions and regular adding-to and maintenance while observing these rules. Every system tends to do their own such lists and while the differences created thereby may not be a major difficulty for users, it is clear that retrieval would be easier if diverse database authority lists covering the same areas coincided in content.

As with the data fields, the achievement of progress in this area would require lots of work, lots of good will, and a general commitment to the concept of coordination for the benefit of the end users.

5. Sharing of Machine-Readable Bibliographic Data Between/Among Different Databases

The point hark~~s~~ back to the concept of systematically reviewing other databases in order to find education-related items. Once found, such data, if sufficiently similar to ERIC's data, could be downloaded or otherwise obtained in machine-readable form in order to convert it to ERIC format, thereby expediting the processing of such items into the ERIC database.

C. Stage III: Finding the Right Database to Search

Stage I coordinated the input to each database. Stage II coordinated the processing of that input. At this point, the databases have been constructed. They exist. The database-building or generation phase is over and the searching, finding, and retrieval phase can begin. This stage involves coordination of what you search.

Some possible examples:

1. Directories and "Road-Maps"

Directories or road-maps to the field and to what's available are an obvious necessity. If everything isn't going to be together in one place, then you need to tell people where all the locations are, what's at each location, and how to access those locations.

This is not a new idea and some very fine directories to education Clearinghouses and to education databases were prepared in 1979 and 1982 by the Consortium of Associations for Educational Dissemination (see, for example, ED 184 534). This kind of product needs to be reactivated and to be distributed even more widely than before.

2. Referral Center Activities

The educational community is large. Not everybody will have access to the printed directories or even know of their existence. A well-advertised referral center (with an 800 number) needs to be established to do the same thing verbally and on a personal basis that the directories are designed to do—to point would-be users in the right direction.

The new "Access ERIC" component of ERIC might well be an arm of such an activity, though what is needed is a referral center that encompasses the whole field of education and all types of educational information, not just the wares of a specific system.

3. Mutual Cross-Referencing

A great deal of coordination is possible via the technique of "mutual cross-referencing." By this I mean that each database would take special care to cite the other databases where this information would be useful to the user and where it would enhance retrievability, selection (as a relevant item), availability, etc. Specific examples might be as follows:

- a. GPO's Monthly Catalog cites ED numbers for education-related documents included therein that it has obtained from ERIC. ERIC, in turn, cites SupDoc order numbers for any GPO-available item announced in Resources in Education (RIE).
- b. NTIS cites ED numbers for education-related documents included in its formal bibliographies. ERIC, in turn, cites NTIS's PB (and DTIC's AD) numbers when it processes a document previously processed by these sister agencies.
- c. ERIC cites UMI order numbers for theses and dissertations announced in RIE. UMI agrees to accept EJ numbers as sufficient order numbers for journal article reprints.
- d. The English-speaking countries get together to do a composite union list of English-language serials, indicating for each which national system covers that journal.
- e. Audiovisual items announced in A-V Online, that have companion documents that have been picked up by ERIC, cite the ERIC ED # for the related document, and vice-versa.

D. Stage IV: Retrieval

Now that you've been referred to the correct databases to handle your question, you are faced with the problem of how to search these various sources. Coordination in this area could take the form of:

- assistance in getting education databases online or on CD-ROM;
- providing user aids and searching aids and lists thereof;
- promoting the use of retrieval standards (e.g., agreed-upon meaning of given commands);

- advertising cross-database searching,
- publicizing retrieval options that take full advantage of the capabilities provided by the available data fields in each data base;
- providing the means to eliminate duplicate "hits" (i.e., the same item found in more than one database).
- promoting ERIC via gateway systems and major electronic mail/bulletin board systems, e.g. Telebase Systems, CompuServe, ALANET, EDLINE, etc.

III. The Concept of a "Federation" of Education Databases

If coordinative efforts were attempted in all of the four stages described above, one begins to get a picture of what I will call, for want of a better term, a "federation" of education databases. I would like to further explicate this concept by reference to a letter that the ERIC Facility originally wrote over a dozen years ago. In January 1976, the Policy Development Staff of the then Assistant Secretary for Education (HEW) asked a number of organizations to comment on the following question:

"What should be included in a comprehensive education knowledge base in terms of subject matter and form?"

The ERIC Facility responded as follows:

"A truly comprehensive system would rule out no materials on the basis of form. And, of course, this fits well with modern developments which increase the number and types of media, mix them up, and blur the lines between them. A comprehensive system for the dissemination of educational information should ensure that basic control, access to, and availability of all types of material is established. This does not mean that one system would do it all. Responsibility might be scattered, but responsibility for each should be set. We think that instead of arguing over what kinds of material should fall within your purview you should take it as a given that all education-related materials should be encompassed, but that your "solution" for each class of materials might vary. Government documents, contractor reports, speeches, papers presented at, journal articles, filmstrips, movies, videotapes, textbooks and other commercially available books, dissertations and theses, phonograph records, tape cassettes, research in progress, raw data that will not be published, continuously updated bodies of statistical data, human resources (i.e., experts), statutory and case law, legislation, patents, etc. — all these materials should be provided for in some way. In some cases a Government agency may have responsibility; in other cases a commercial venture may be doing an adequate job; in another instance a professional society may have seized the baton. The problem is that no one is overseeing the whole complex picture to ensure completeness, to ensure continuity, and to ensure responsiveness to new situations."

Later, in response to follow-up questions relating specifically to types of educational resources and the extent of Government responsibility, the Facility elaborated as follows in February 1976:

"Educational Resources - Types

A typology of educational resources would not be difficult to generate. We can come up with most of them off the top of the head, and we have our own preferences as to which should be given priority, e.g., books. (See Figure 1 attached.) What needs to be done is to investigate each type systematically: What are the present arrangements: Are they adequate or inadequate? What is the need? What is the volume/of material? etc. For each type there should be generated firm recommendations and priorities based on the factual data available. Once this is done, you then simply set to work and bring each type "into the fold" one by one. As we pointed out before, this does not imply massive Government expense for each type.

Government Responsibility

Admittedly, we do see Government as overseeing the entire complex simply because there is no other logical entity that can bring the fragmented parts together. However, we see the responsible Government unit operating as an "umbrella," encompassing a number of bedfellows, rather than a simple monolithic facility doing everything itself. What can be self-supporting should be, and there should be a regular policy to encourage this approach. The Government body would see that all areas are adequately covered, that new or emerging areas are taken into account, that coverage is continuous and without gaps, that certain levels of quality are maintained in the processing and in the services, that prices to the public are fair and reasonable, etc."

At the time this response was developed, the ERIC Facility also generated Figure 2 (attached) that attempts to portray graphically the major thought contained in the response, i.e., ERIC as an organization having a long range goal of ensuring that all domestic educational resources are available to users through clearly delineated channels (monitored by ERIC to see that they at least stay open). This figure, though now quite dated by the passage of time and inaccurate due to organizational changes during the past ten years, can still be used to convey this basic idea and is, therefore, reproduced here.

IV. CONCLUSION

The ERIC Facility clearly believes that there exist many possibilities at many levels for helping to coordinate the activities of the various education information databases. These possibilities have been described in general terms under the four headings: (1) Coverage, Acquisitions, Selection; (2) Processing; (3) Finding the Right Database; and (4) Retrieval. In each case, specific coordinative possibilities have been outlined.

One might well ask at this stage, however, about specific databases. What are the databases that might fit into this scheme, that might be "coordinated," that might join into a loose "federation"?

It is a fair question and its answer would serve to bring this paper down to earth, where it would prefer to be. In an attempt to answer it, we have prepared a table of education-related databases that would be actual participants in any of these coordinative ventures. The databases have been divided into two groups: (1) Primary Education Databases (where the focus of the database is education); and (2) Secondary Education Databases (where the focus is elsewhere, e.g. sociology, but that contain some education-related material). For each database we have indicated the source organization, the online vendor providing access, the printed version, and some indication of coverage.

Any attempt at coordinating education information databases in the ways described in this paper would want to start with the Primary Group.

ATTACHMENT A

EDUCATIONAL RESOURCES—COMPREHENSIVE LIST OF TYPES OF MATERIAL

Printed Media

Books

Monographs

Textbooks

Children's Books

Conference/Meeting Materials

Proceedings

Papers/Presentations/Speeches

Databases (Machine-Readable)

Bibliographic

Numeric-Statistical

Experimental Data (Raw)

Foreign Language Materials

Translations

Fugitive Materials (Miscellaneous)

Annual Reports

Bibliographies

Course Catalogs

Newsletters

Specifications/Standards

Instructional/Curriculum Materials

Journals

Journal Articles

Legal Materials

Laws/Legislation

Court Cases/Decisions

Regulations

Maps

Newspapers

Patents

Technical/Research Reports

Contractor Reports

Theses/Dissertations

Doctoral

Masters

Practicums

Non-Print Media

Audio Materials

Audiotapes

Phonodiscs

Blind Materials

Braille Books

Talking Books

Compact Discs (CD-ROM)

Film/Filmstrips/Slides

Film/Filmstrips/Slides

Manuscripts

Microforms

Microcard

Microfiche

Microfilm

Microprint

Prints and Photographs

Video Materials

Videodiscs

Videotapes

Other

Human Resources

(Consultants, Reviewers,
Experts, Advisors, etc.)

Institutions (Directories)

Museum Resources

Research in Progress

(Project Descriptions)

Statistical Data

Educational Practices

Referral Locations

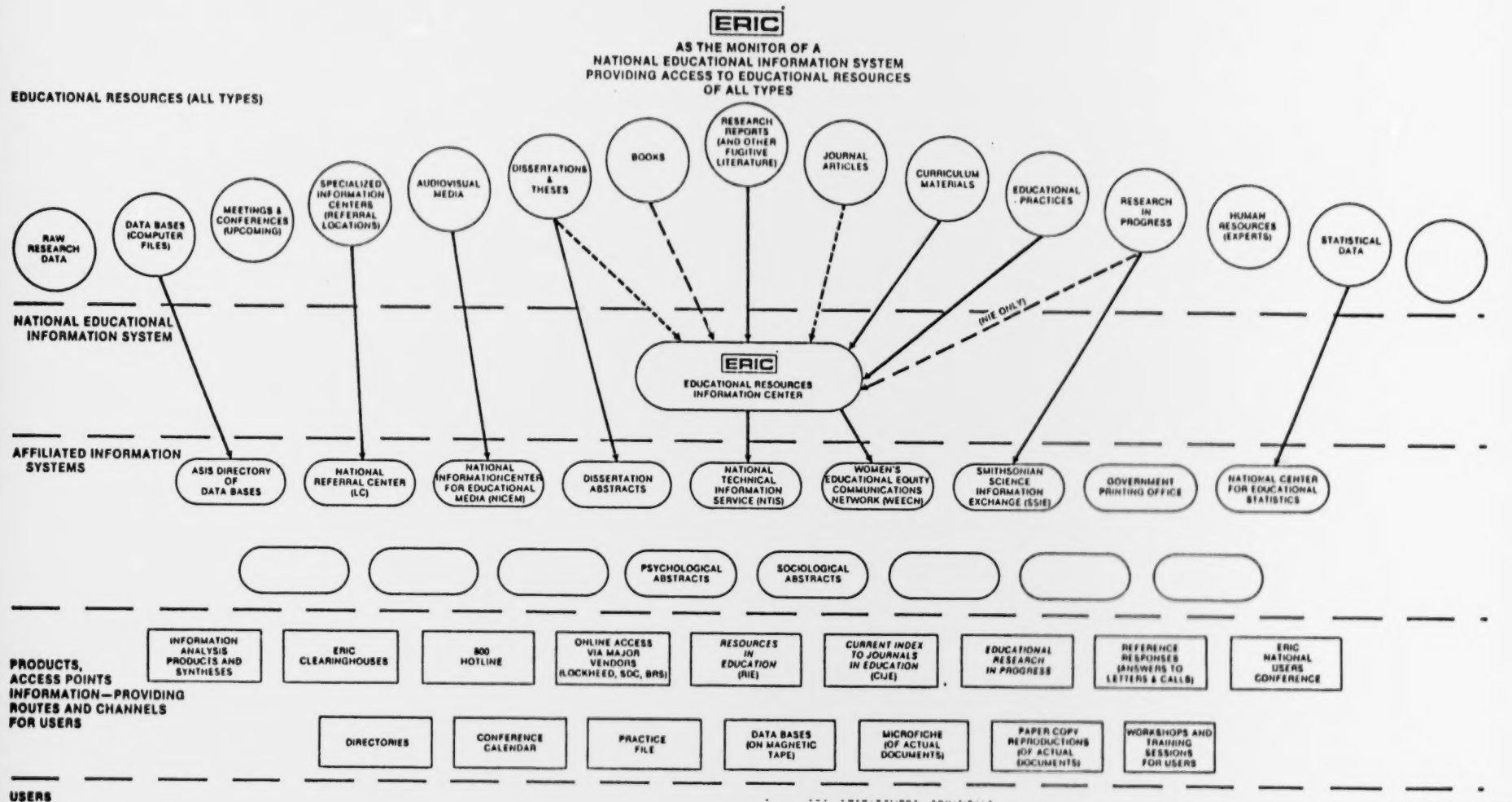
(Information Centers)

Meetings and Conferences

(Upcoming)

Raw Research Data

Software (Computer Programs)



1. PRIMARY EDUCATION DATABASES

	DATABASE	PRINTED FORM	SOURCE ORGANIZATION	COVERAGE	ONLINE VENDOR	ID	NOTES
1	EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)	A. <u>RESOURCES IN EDUCATION (RIE)</u> B. <u>CURRENT INDEX TO JOURNALS IN EDUCATION (CIJE)</u>	U.S. DEPT. OF EDUCATION	BIBLIOGRAPHIC RIE = DOCUMENTS CIJE = JOURNAL ARTICLES	DIALOG BRS ORBIT	FILE 1 ERIC ERIC	
2	AUSTRALIAN EDUCATION INDEX (AEI)	A. <u>AUSTRALIAN EDUCATION INDEX (AEI)</u> B. <u>BIBLIOGRAPHY OF EDUCATION THESES</u>	AUSTRALIAN COUNCIL FOR EDUCATIONAL RESEARCH	BIBLIOGRAPHIC	AUSINET (ACI COMPUTER SERVICES)	AE11	ACER THESAURUS BASED ON ERIC.
3	BRITISH EDUCATION INDEX (BEI)	A. <u>BRITISH EDUCATION INDEX (BEI)</u> B. <u>BRITISH EDUCATION THESES INDEX (BETI)(MF)</u>	UNIVERSITY OF LEEDS	BIBLIOGRAPHIC BEI = JOURNAL ARTICLES BETI = THESES	DIALOG	FILE 121	BEI THESAURUS BASED ON ERIC.
4	CANADIAN EDUCATION INDEX (CEI)	A. <u>CANADIAN EDUCATION INDEX (CEI)</u> B. <u>DIRECTORY OF EDUCATION STUDIES IN CANADA</u>	CANADIAN EDUCATION ASSOCIATION and MICROMEDIA LTD.	BIBLIOGRAPHIC	---	---	CEI THESAURUS BASED ON ERIC. DIALOG NEGOTIATING FOR FILE.
5	EDUCATION INDEX	SAME	H.W. WILSON COMPANY	BIBLIOGRAPHIC ---JOURNAL ARTICLES	WILSON- LINE		

I. PRIMARY EDUCATION DATABASES

	DATABASE	PRINTED FORM	SOURCE ORGANIZATION	COVERAGE	ONLINE VENDOR	ID	NOTES
6	EXCEPTIONAL CHILD EDUCATION RESOURCES (ECER)	SAME	COUNCIL FOR EXCEPTIONAL CHILDREN (CEC)	BIBLIOGRAPHIC	DIALOG BRS	FILE 54 ECER	CONSIDERABLE OVERLAP WITH ERIC
7	ONTARIO EDUCATION RESOURCES INFORMATION SYSTEM (ONTERIS)	NONE	ONTARIO MINISTRY OF EDUCATION	BIBLIOGRAPHIC (MOSTLY CANADIAN NON-JOURNAL MATERIALS)	BRS	ONED	
8	AIM/ARM (ABSTRACTS OF INSTRUCTIONAL MATERIALS/RESEARCH MATERIALS [IN VOCATIONAL AND TECHNICAL EDUCATION])	SAME		BIBLIOGRAPHIC (VOC ED)	DIALOG	FILE 9	FILE INACTIVE AFTER 1976.
9	VOCATIONAL EDUCATION CURRICULUM MATERIALS	NONE	CENTER FOR EDUCATION AND TRAINING ON EMPLOYMENT (OHIO STATE UNIV.)	BIBLIOGRAPHIC AND NON-PRINT (VOC ED)	BRS	VECH	
10	RESOURCES IN VOCATIONAL EDUCATION (RIVE)	NONE	UNIV. OF CALIFORNIA ---GRADUATE SCHOOL OF EDUCATION	PROJECTS AND RESEARCH IN PROGRESS (VOC ED)	BRS	RIVE	INDEXING BASED ON ERIC <u>THESAURUS</u>

1. PRIMARY EDUCATION DATABASES

	DATABASE	PRINTED FORM	SOURCE ORGANIZATION	COVERAGE	ONLINE VENDOR	ID	NOTES
11	EDUCATIONAL TESTING SERVICE (ETS) ---TEST COLLECTION	<u>ETS TEST COLLECTION CATALOG</u>	EDUCATIONAL TESTING SERVICE (ETS)	STANDARD TESTS IN EDUCATION AND BUSINESS	BRS	ETSF	INDEXING BASED ON ERIC <u>THESAURUS</u>
12	MENTAL MEASUREMENTS YEARBOOK	SAME	BUROS INST. OF MENTAL MEASUREMENTS (UNIV. OF NEBRASKA)	ENGLISH-LANGUAGE TESTS COVERED IN <u>MENTAL MEASUREMENTS YEARBOOK</u>	BRS	MHYD	
13	A-V ONLINE	Various, e.g. <u>FILM AND VIDEO FINDER</u> <u>AUDIOCASSETTE FINDER</u>	NATIONAL INFORMATION CENTER FOR EDUCATIONAL MEDIA (NICEM) C/O ACCESS INNOVATIONS INC.	NON-PRINT EDUCATIONAL MEDIA	DIALOG	FILE 46	
14	RESOURCES ORGANIZATIONS AND MEETINGS FOR EDUCATION (ROME)	NONE	CENTER FOR EDUCATION AND TRAINING ON EMPLOYMENT (OHIO STATE (UNIV.))	ORGANIZATIONS INVOLVED IN EDUCATION	BRS	ROME	INDEXING BASED ON ERIC <u>THESAURUS</u> .
15	NATIONAL COLLEGE DATABANK	A. <u>PETERSON'S GUIDE TO FOUR-YEAR COLLEGES</u> B. <u>PETERSON'S GUIDE TO TWO-YEAR COLLEGES</u>	PETERSON'S GUIDES, INC.	U.S. AND CANADIAN UNIVERSITIES AND COLLEGES	BRS	PETE	

I. PRIMARY EDUCATION DATABASES

	DATABASE	PRINTED FORM	SOURCE ORGANIZATION	COVERAGE	ONLINE VENDOR	ID	NOTES
16	PETERSON'S COLLEGE DATABASE	SAME AS ABOVE	SAME AS ABOVE	SAME AS ABOVE	DIALOG	FILE 214	
17	ELECTRONIC DIRECTORY OF EDUCATION	CIC'S SCHOOL DIRECTORY	MARKET DATA RETRIEVAL, INC.	• PUBLIC SCHOOL DISTRICTS • PUBLIC, PRIVATE, CATHOLIC SCHOOLS • TWO-YEAR COLLEGES • FOUR-YEAR COLLEGES • PUBLIC LIBRARIES	DIALOG	FILE 511	
18	KIDSNET	<u>KIDSNET BULLETIN AND CALENDAR</u> (MONTHLY)	KIDSNET INC.	CHILDREN'S TV, RADIO, AUDIO, AND VIDEO PROGRAMMING	ALANET BELL ATLANTIC GATEWAY (WASH. METRO AREA ONLY)		
19	EDUCATIONAL MATERIALS IN LIBRARIES (EMIL)	NONE	ONLINE COMPUTER LIBRARY CENTER (OCLC)	EDUCATION-RELATED BOOKS IN OCLC'S ONLINE UNION CATALOG (INCLUDING LC MARC RECORDS)	OCLC		ALSO ON OCLC'S SEARCH CD450 EDUCATION SERIES PRODUCT, AVAILABLE ON CD-ROM.

II. SECONDARY EDUCATION DATABASES

	DATABASE	PRINTED FORM	SOURCE ORGANIZATION	COVERAGE	ONLINE VENDOR	ID	NOTES
1	DISSERTATION ABSTRACTS ONLINE	[VARIOUS]	UNIVERSITY MICROFILMS INT. (UMI)	BIBLIOGRAPHIC ---DISSERTATIONS/THESES	DIALOG BRS	FILE 35 DISS	
2	NATIONAL TECHNICAL INFORMATION SERVICE (NTIS)	<u>GOVERNMENT REPORTS ANNOUNCEMENTS</u>	NTIS	BIBLIOGRAPHIC ---GOVERNMENT TECHNICAL REPORTS	DIALOG BRS ORBIT	FILE 6 NTIS NTIS	
3	GPO MONTHLY CATALOG	<u>MONTHLY CATALOG OF GOVERNMENT PUBLICATIONS</u>	GOVERNMENT PRINTING OFFICE (GPO)	BIBLIOGRAPHIC ---GOVERNMENT DOCUMENTS	DIALOG BRS	FILE 66 GPOH	
4	LC MARC---BOOKS	NONE	LIBRARY OF CONGRESS (LC)	BIBLIOGRAPHIC ---BOOKS	DIALOG	FILE 426	
5	BOOKS IN PRINT	SAME	R.R.BOWKER CO.	BIBLIOGRAPHIC ---BOOKS (U.S.)	DIALOG BRS	FILE 470 BBIP	
6	BRITISH BOOKS IN PRINT	?	J. WHITAKER & SONS LTD.	BIBLIOGRAPHIC ---BOOKS (U.K.)	DIALOG	FILE 430	
7	MAGAZINE INDEX	SAME (COM)	INFORMATION ACCESS CO.	BIBLIOGRAPHIC ---JOURNAL ARTICLES	DIALOG BRS	FILE 47 MAGS	

11. SECONDARY EDUCATION DATABASES

	DATABASE	PRINTED FORM	SOURCE ORGANIZATION	COVERAGE	ONLINE VENDOR	ID	NOTES
8	PSYCINFO	<u>PSYCHOLOGICAL ABSTRACTS</u>	AMERICAN PSYCHOLOGICAL ASSOC. (APA)	BIBLIOGRAPHIC	DIALOG BRS	FILE 11 PSYC	
9	SOCIOLOGICAL ABSTRACTS	SAME	SOCIOLOGICAL ABSTRACTS INC.	BIBLIOGRAPHIC	DIALOG BRS	FILE 37 SOCA	
10	HISTORICAL ABSTRACTS	SAME	ABC-CLIO INFORMATION SERVICES INC.	BIBLIOGRAPHIC	DIALOG	FILE 39	
11	AMERICA: HISTORY AND LIFE	SAME	SAME AS ABOVE	BIBLIOGRAPHIC	DIALOG	FILE 38	
12	RELIGION INDEX	[VARIOUS]	ATLA RELIGION INDEXES	BIBLIOGRAPHIC	DIALOG	FILE 190	
13	ECONOMIC LITERATURE INDEX	<u>INDEX OF ECONOMIC ARTICLES</u>	<u>JOURNAL OF ECONOMIC LITERATURE</u>	BIBLIOGRAPHIC	DIALOG	FILE 139	
14	PAIS INTERNATIONAL	<u>PAIS BULLETIN</u> <u>PAIS FOREIGN LANGUAGE INDEX</u>	PUBLIC AFFAIRS INFORMATION SERVICE (PAIS)	BIBLIOGRAPHIC	DIALOG BRS	FILE 49 PAIS	

11. SECONDARY EDUCATION DATABASES

	DATABASE	PRINTED FORM	SOURCE ORGANIZATION	COVERAGE	ONLINE VENDOR	ID	NOTES
15	SPORT	<u>SPORT BIBLIOGRAPHY</u>	SPORT INFORMATION RESOURCE CENTRE	BIBLIOGRAPHIC	DIALOG BRS	FILE 48 SFDB	
16	FAMILY RESOURCES	NONE	NATIONAL COUNCIL ON FAMILY RELATIONS	BIBLIOGRAPHIC	DIALOG BRS	FILE 291 NCFR	
17	LIBRARY AND INFORMATION SCIENCE ABSTRACTS (LISA)	<u>CURRENT RESEARCH IN LIBRARY AND INFORMATION SCIENCE</u>	LIBRARY ASSOCIATION (ENGLAND)	BIBLIOGRAPHIC	DIALOG ORBIT	FILE 61 LISA	
18	INFORMATION SCIENCE ABSTRACTS	SAME	IFI/PLENUM DATA CO.	BIBLIOGRAPHIC	DIALOG	FILE 202	
19	LINGUISTICS AND LANGUAGE BEHAVIOR ABSTRACTS	SAME	SOCIOLOGICAL ABSTRACTS INC.	BIBLIOGRAPHIC	DIALOG BRS	FILE 36 LLBA	
20	PHILOSOPHER'S INDEX	SAME	PHILOSOPHY DOCUMENTATION CENTER (BOWLING GREEN UNIV.)	BIBLIOGRAPHIC	DIALOG	FILE 57	

11. SECONDARY EDUCATION DATABASES

	DATABASE	PRINTED FORM	SOURCE ORGANIZATION	COVERAGE	ONLINE VENDOR	ID	NOTES
21	MANAGEMENT CONTENTS	NONE?	INFORMATION ACCESS CO.	BIBLIOGRAPHIC ---JOURNAL ARTICLES	DIALOG BRS	FILE 75 MGMT	
22	ABI/INFORM	NONE	DATA COURIER INC.	BIBLOGRAPHIC ---JOURNAL ARTICLES (BUSINESS AND MANAGEMENT	DIALOG BRS ORBIT	FILE 15 INFO INFORM	
23	CHILD ABUSE AND NEGLECT	[VARIOUS]	NATIONAL CENTER ON CHILD ABUSE AND NEGLECT (DHHS)	• BIBLIOGRAPHIC • ONGOING RESEARCH • COURT DECISIONS • STATUTES • A-V MATERIALS • SERVICE PROGRAMS/ PROJECTS	DIALOG	FILE 64	
24	ARTS & HUMANITIES SEARCH	<u>ARTS & HUMANITIES CITATION INDEX</u>	INSTITUTE FOR SCIENTIFIC INFORMATION (ISI)	BIBLIOGRAPHIC ---JOURNAL ARTICLES (PLUS CITATIONS THEREIN)	DIALOG BRS	FILE 439 AHCI	
25	SOCIAL SCISEARCH	<u>SOCIAL SCIENCE CITATION INDEX</u>	SAME AS ABOVE	SAME AS ABOVE	DIALOG BRS	FILE 7 SSCI	
26	MICROCOMPUTER SOFTWARE GUIDE	<u>SOFTWARE ENCYCLOPEDIA</u>	R.R.BOWKER CO.	MICROCOMPUTER SOFTWARE	DIALOG	FILE 27B	

11. SECONDARY EDUCATION DATABASES

	DATABASE	PRINTED FORM	SOURCE ORGANIZATION	COVERAGE	ONLINE VENDOR	ID	NOTES
27	AMERICAN LIBRARY DIRECTORY	SAME	R.R. BOWKER COMPANY	LIBRARIES (U.S.)	DIALOG	FILE 460	
28	ACADEMIC AMERICAN ENCYCLOPEDIA	SAME	GROLIER ELECTRONIC PUBLISHING, INC.	ENCYCLOPEDIA ENTRIES	DIALOG	FILE 180	
29	EVERYMAN'S ENCYCLOPEDIA	SAME	LEARNED INFORMATION LTD.	DIALOG	FILE 182		
30	LIBRARY LITERATURE	<u>LIBRARY LITERATURE</u>	H.W. WILSON CO.	BIBLIOGRAPHIC (PRIMARYLY JOURNALS)	WILSON-LINE		

WHAT ARE THE POSSIBILITIES FOR COORDINATING
EDUCATION INFORMATION DATABASES?

(A Summary for Verbal Presentation)

(Running Time: 12 Minutes)

This paper comes in two halves: (1) a relatively short first section that discusses the concept of bibliographic control over a discipline or segment of the literature (such as education) and that offers some thoughts on why ERIC has not significantly increased its coverage over the total literature of education in the past 20 years; and (2) a second, longer section that discusses the alternatives to increased coverage and to doing it yourself, that is: coordination, cooperation, compatibility, etc., with other databases engaged in the same general kinds of activities as ERIC.

When I joined ERIC in 1970, it had just added to its stable a new file and a second abstract journal, Current Index to Journals in Education (CIJE). This file expanded ERIC's coverage, from the technical report or "fugitive" literature, where ERIC staked its first claim (announced in Resources in Education (RIE)), and extended it to the journal article literature of education.

I was impressed. ERIC had started in 1966 and here, only three years later in 1969, it was already adding a second major segment of the literature. I could just see in my mind's eye the natural progression that lay ahead: books, dissertations/theses, state documents, international and foreign/English-language materials, and so forth. Maybe even non-print materials. This picture fit well with my own special interest in comprehensive bibliographic control and I was ready to take on the challenge.

Well, here we are, quite a few years later, and ERIC has not added a major new segment of the literature or resources of education to its coverage since those balmy days of 1969. What happened?

What happened was simply that ERIC's budget stopped growing and it has never in the intervening years had the resources to add books, or any other major segment of the literature, to its coverage.

Initially, that didn't halt its expansionist dreaming. Over the years, I have seen all of the literature types mentioned above discussed and debated quite seriously for possible coverage. But they somehow all remained dreams. At first various excuses were proffered: (1) the book literature was handled so adequately by conventional library systems that it would be redundant to cover it in ERIC; (2) the dissertation literature was handled adequately by University Microfilms International (UMI); 3) the educational community in this country had little interest in the literature of other countries, and so it went. It hasn't been until the last few years, when the funding crunch has threatened the viability of the entire ERIC system itself, that the excuses have stopped and taking their place have been the real reasons: the lack of an official agency mandate for increased coverage and the funds to make good on such a mandate.

The picture hasn't been entirely bleak. I should point out that there have been at least three somewhat successful coverage-related efforts in my time:

- (1) Significant efforts have been made to improve the coverage of state documents. There is still a lot more to done in this area, but ERIC's coverage of state documents is far better now than in the past. [Local documents is another story, however.]
- (2) Also improved is the coverage of practitioner-oriented materials. ERIC started as research-oriented and a lot of people still remember it that way. But it has always contained some practitioner materials and there has been much success in getting this practice into the formal acquisitions and selection policies, into the minds of the ERIC acquisitions librarians, and ultimately, into the database.
- (3) And recently, ERIC has added a new category of "publication" or "documentation" that it will cover: machine-readable data files, containing education-related data. The inflow of items in this new category has been modest to date, but it is a beginning.

So what do you do when you can't acquire it yourself, process it yourself, and put it into your own data base?

Well, I think you have to do those nice-sounding things previously mentioned: coordinate, cooperate, be compatible, etc. In other words, if you can't do it yourself, and you believe it should be done, then you are forced to work with others to see that it gets done or that at least steps are made in the right direction.

I'm not saying that ERIC doesn't need more funding. I think it does. And I definitely think that there are some things that ERIC should do itself in the interests of one-stop-information-shopping and a more comprehensive national bibliographic database for education. At the same time, however, there are many positive, needed, and efficiency-engendering things that can be accomplished by coordinating with others.

In my paper, I distinguish four stages of work where coordination can take place. For each stage, I provide some specific practical possibilities. The practical possibilities take up the bulk of the written paper and, in the interests of keeping this verbal summary within limits, are only mentioned here in the form of a few unelaborated examples.

1. Acquisitions, Selection, Coverage

This is the stage where you decide what you cover. It divides up the pie. This is the pre-processing stage and ideally involves coordination to ensure that everything is covered and the user can tell who covers what. It may also involve agreements to transfer materials between coordinating participants, as appropriate, in accordance with the coordination protocols.

Examples might be:

- allocating coverage of each country's education journal to that country's equivalent of ERIC
- transferring non-print materials accompanying documents (or news about such items) to a designated "A-V Database for Education."
- coverage of all doctoral level education-related dissertations systematically by arrangement with UMI.
- contributing education-related book bibliographic data from the OERI "National Education Library" to the IC and OCLC union catalog files.
- creating a union list of education serials, indicating for each the covering database.
- systematically reviewing certain primary and secondary databases to detect possible input for ERIC.

2. Processing

This is the stage concerned with how you cover the material, how you process it. At this database-generation stage, coordination would ideally involve the achievement of some compatibility in processing techniques and conventions, authority lists, indexing vocabularies, etc. Achieving some basic similarities between databases at this stage would be beneficial for the users who would then have less to learn and who would not be faced with mind-numbing differences between sources and systems.

However, it is important to realize that this is a particularly difficult area for long-established systems to make much progress in because of the heavy investment in the existing structures. Databases that have done something a certain way for many years are not easily changed without trauma to software, online vendors, users, etc., not to mention the backroom boys like myself.

Practical examples of cooperation at this stage might be:

- exchanging new terminology information between the education thesauri of the English-speaking countries.
- coordination of new data fields and authority lists by education-related databases.
- commitment to use applicable new ANSI/NISO standards relating to information and joint consultation on this when possibilities arise.

3. Finding the Right Database to Search

Stage 1 coordinated the input to each database. Stage 2 coordinated the processing of that input. At this point, the database-building phase is over and the retrieval phase can begin. This stage involves coordination of where you search.

Examples might be:

- joint comprehensive directories and "road-maps" to what's available.
- comprehensive referral services via a national 800 number.
- mutual cross-referencing between systems, i.e. GPO/ERIC, NTIS/ERIC, UMI/ERIC.

4. Retrieval

Now that you've been referred to the correct database to handle your question, you are faced with the problem of how to search these various sources.

Examples might be:

- promoting user searching aids.
- advertising cross-database searching.
- publicizing retrieval options that take full advantage of available data fields.
- providing assistance in getting education databases online or on CD-ROM.

- promoting use of retrieval standards (e.g., the Common Command Language).
- promoting ERIC and other education databases via gateways.
- training
 - major participation in training sessions offered by the online vendors.
 - holding training sessions for users.

If coordinative efforts were attempted in all of the four stages, one begins to get a picture of what I will call, for want of a better name, an "affiliation" or "federation" of education databases. This conceptualizes ERIC as an organization having a long range goal of ensuring that all domestic educational resources are available to users through clearly delineated channels.

I would like to move toward closure by quoting to you a passage from a letter that the ERIC Facility wrote to the Assistant Secretary for Education a dozen years ago in response to a question from that office about coordinating education knowledge bases.

QUOTE: "A truly comprehensive system would rule out no materials on the basis of form....A comprehensive system for the dissemination of educational information should ensure that basic control, access to, and availability of all types of materials is established. This does not mean that one system would do it all. Responsibility might be scattered, but responsibility for each type should be set. We think that instead of arguing over what kinds of material should fall within your purview you should take it as a given that all education-related material should be encompassed, but that your "solution" for each class of materials might vary....In some cases a Government agency may have responsibility; In other cases a commercial venture may be doing an adequate job; in other instances a professional society may have seized the baton. The problem is that no one is overseeing the whole complex picture to ensure completeness, to ensure continuity and to ensure responsiveness to new situations...A typology of educational resources would not be difficult to generate....What needs to be done is to investigate each type systematically: what are the present arrangements? Are they adequate or inadequate? What is the need? What is the volume of material? etc. For each type there should be generated firm recommendations and proprieties based on the factual data available. Once this is done, you then simply set to work and bring each type "into the fold" one by one....This does not imply massive Government expense for each type....Admittedly, we see Government as overseeing the entire complex, simply because there is no other logical entity that can bring the fragmented parts together. However, we see the responsible Government unit

operating as an "umbrella," rather than a single monolithic facility doing everything itself. What can be self-supporting should be, and there should be a regular policy to encourage this approach. The Government body would see that all areas are adequately covered, that new or emerging areas are taken into account, that coverage is continuous and with gaps, that certain levels of quality are maintained in the processing and in the services, that prices to the public are fair and reasonable, etc." CLOSE QUOTE

As you can see, the ERIC Facility clearly believes that there exist many possibilities at many levels for helping to coordinate the activities of the various education information databases. These possibilities extend from some of the simple everyday things that are going on right now (such as the exchange of lexicographic decisions and new indexing terminology) to the end-product ideal of a loose but comprehensive "family" of databases, integrated with each other in terms of coverage, processing, retrieval, and referrals.

In the best of all possible worlds, ERIC would get the funding to do certain additional things itself and also to coordinate with other databases, where that is the most cost effective solution to a given aspect of the problem. Since new funding is problematical these days, the coordinative possibilities will no doubt receive ever more scrutiny in the future. Hopefully, this paper (in its complete written form) suggests some specific initiatives and the specific databases that would be involved in such initiatives, for the use of those making future decisions about ERIC program improvement.